never talked about the business of their past working days when they met. Sometimes they showed a fleeting interest in news of the postings of friends still in service, but even the official matters of Thaton district itself did not enter into their discussions. They talked of charity donations, of the respective monasteries which they endowed and attended, and of formulæ of *eggaya-hto*, alchemy, or the search for the philosopher's stone which will turn all metals to gold. Most Burmans get interested in eggaya-hto during their later years, even if few now practise it.

This alchemy, which has no place among the true teachings of Buddhism, has to be done under auspicious astrological influences and is usually carried on in secret. Burman Buddhists condemn the use of it when it is carried on for *lawba*, greed for riches, but others justify the process as a means of concentrating the mental faculties. The common stories tell of hermits in the forests, who by their ascetic life and concentrated meditation have more powers over the forces of nature, as being well versed in the processes of alchemy. When such a hermit achieves the extreme concentration of mind on his task he is successful—the philosopher's stone is discovered, the body of the hermit then disappears in the dissolving of matter, and his spirit is free to live unhampered by the body, till the arrival of the next Buddha on the earth. Most Burmese women, however, although they believe that this happens in the case of hermits, object very strongly to the practice of alchemy on the part of their menfolk, owing to the money and energy that is wasted on seeking out new and expensive formulæ once the craze has got hold of a man. All experiments are started with mercury which is melted with other minerals, animal or vegetable substances which derive their magical properties partly from their inaccessibility, partly from being treated with prescribed rites. My father had no intention of taking up alchemy and impoverishing us, but he too was very interested to hear of the success and failure of various methods. These discussions must have been kept well anchored to reality by the other chief topic of discussion—the families of the pensioners.

The five duties of a parent towards his children include the settling of the child in a good marriage. By the time the a-so-ya mins retire, their sons and daughters have reached a marriageable age. The sons are in the process of winning a good position in one of the government services and their daughters have been dressed with an adequate amount of jewellery. The marriage market, which had no existence in former Burmese society and which still is unheard of in Ye, and among the poorer people, is now a very concrete institution among the educated and modern classes. The rise of the minkadaw class and of higher paid Class I government officials has been mainly responsible for this. More

2:Scott G-5 (1870's-1909)1910 AP1 Burma
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CHAPTER I

FIRST YEARS

IT is fortunate for the young Burman that on his first appearance in the world all attention is directed to the mother, and the "little stranger" is left very much to himself till he has attained a stronger vitality. Were it not so, the rival parties of the Dietists and Druggists might quarrel over the relative quantities of the four elements, fire, air, earth, and water, composing the new arrival, and diet and dose him out of existence immediately, in a heroic attempt to attain an equilibrium of forces. The mother indeed is the major point of interest in all countries, but childbirth nowhere entails such penalties as in Burma. Directly the child is born, the mother is rubbed all over with na-nwin (turmeric), and a big fire is lighted as near as the construction of the wooden or bamboo house permits, while rugs and blankets are heaped over her to the extent of the possessions of the family. As speedily as possible the midwife prepares a draught called se sein (green medicine), the composition of which is a tradition with the Wun-swès, and is kept a secret from inquisitive males. This the victim in bed has to drink perpetually during seven days, and for the same period, irrespective of the blankets and the time of year, is heated up with ôk pu. These are big circular or lozenge-shaped bricks. They are heated blazing hot in the wood fire, dropped for a few seconds into a pot full of water, and then wrapped up in cloths and applied to the body of the mother. In addition to this, doses of turmeric are regularly administered, and every now and then

2:Scott G-5 (1870's-1909)1910 APl Burma
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CHAPTER XLII

MAKING GOLD

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THE Burmese have no more escaped from the craze for the discovery of the philosopher's stone than other civilised peoples. Even at the present day there are numbers of goldsmiths and other handicraftsmen in the principal towns of Lower Burma who might be prosperous and happy, did not the craving for the discovery of a means of making gold perpetually disturb their minds, and impel them to waste their earnings in dabblings with mercury and strange-looking mineral and vegetable products. Mercury is what the experimenter always starts with. Every would-be discoverer commences his researches with mercury; and it is on this account a matter for congratulation that it is so expensive; otherwise, we might have far more people doing damage to themselves and others than is even now the case. A very great fire in Rangoon was caused by a searcher after secrets capsizing his crucible while suddenly pouring in mercury. For greater secrecy, and because his horoscope said it was a favourable time, he was working at three in the morning. His house took fire; and when day dawned the whole of Edward Street—one of the wealthiest inhabited by Burmans—was a heap of smouldering ashes. The originator of the fire, instead of being abused for his carelessness, was condoled with, because he was able to assert that the accident happened at the supreme moment, when he was trembling on the verge of the great discovery that would have made his own and all the neighbouring goldsmiths' fortunes. But accidents of this kind are not of frequent occurrence. The damage is usually limited to burnt fingers,

2:Scott G-5 (1870's-1909)1910 AP1 Burma
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and constitutions shattered with the red fumes of the heated mercury. Sometimes, however, men who have lost their possessions in attempting to make gold, fall upon the notion of repairing their fortunes by making money—coining as it is called in ordinary parlance. Luckily, few have the skill requisite for this smashing business; and the counterfeit coin put about is such as should hardly deceive any man who has ever seen a genuine piece of money before.

Naturally with so many people experimenting, there are always rumours of the discovery having been made. Indeed, methods are known by which the great object can be attained—with proper care and the selection of a favourable hour. One of these is quite infallible, and is so regarded even by those who have tried it many times without success. If there has been any failure it is because of some miscalculation in selecting a lucky moment from the sada, the horoscope which every one possesses; or because some unavoidable hitch in the operations allowed the propitious hour to pass. That there is any doubt about the feasibility of the process no one dreams of hinting. Have not skilled sayās exhibited the metal—undoubted gold—which they have made?

This method is as follows. On the slopes of Kyaikhtiyo, the hill on which, perched on a gigantic boulder, stands the famed pagoda of that name, grows a peculiar kind of tree, the stem of which is flattened out in a singular way, so that it gets the name of se nga-pè, from a flat flounder-like fish called nga-pè. This tree is cut down, and the trunk is chopped into little pieces, which are then squeezed in as effectual a way as the limited machineries in a Burman's household can do it. The chips are pressed between two stones; or the bullock-cart is passed over them; or the good man of the house puts his teak box on the top of them, and summons the family to sit upon it. Any way, the chips must be well squeezed; many failures are due to remissness in this respect. The chips are next thrown into a long crucible, half filled with mercury, and the mixture is subjected to the heat of a roaring wood fire. By this simple process, the sayās have obtained pure gold—a little mixed with ashes, if there has been too much of

2:Scott G-5 (1870's-1909)1910 AP1 Burma
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the se nga-pè, but otherwise pure enough to content the most fastidious assayist. The only time I ever witnessed the operation, we were prematurely choked off by the wood smoke and the red fumes of the mercury; and when we went back again towards sunrise, we got nothing but a quantity of very malodorous charred wood. There was a mistake somewhere in conducting the experiment.

There is another method well vouched for, and it is much less trying to the temper and constitution than the other, though perhaps a little more difficult of execution; seeing that a good deal depends upon extraneous help, which is not always available, and then only in special localities. You get a small piece of paladôtta, copperas, or green vitriol, and persuade a fish to swallow it. Any kind of fish will not do. You must seek out the nga hkônma, a silvery fish, which grows to the length of about a foot, and is, I believe, known to science as *Barbus sarana*. It is most certain if you introduce the copperas into the living fish, let the creature loose, and catch it again. If you are in a hurry, however, it is sufficient to put the copperas into the dead creature's stomach. When it is taken out again it is quite changed in appearance. I have never been fortunate enough to see the thing done, but sayās say the change is quite remarkable. This new substance is put into a mass of copper, and either allowed to remain there till the change comes about, or heated in a crucible to accelerate the process. In a successful experiment half the metal should become pure silver, and the other half remain copper, the two being on separate sides of the vessel and not mixed up together. This method, competent alchemists say, is infallible; but somehow it does not seem to enrich them. Perhaps they spend their gains in searching after more lucrative processes. When you can make silver, the desire to make gold is doubtless only intensified.

I will mention only one more method, which was more satisfactory than any while it lasted, but was brought to an abrupt end by the exhaustion of the raw material. A ship was driven on shore near Negrais, the promontory on the south-west coast of Burma, and was broken up in a violent storm. Among the wreckage was discovered a small quantity

2:Scott G-5 (1870's-1909)1910 AP1 Burma
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● 822 of some substance, which those who found it called a-yet hkè (congealed or solidified spirit), on the analogy of yè hkè (ice). How they came to try it I do not know; but after a while it was found out that this was the grand secret. A small fragment of this stuff proved thoroughly effectual in converting the baser metals into gold. No matter what it was tried on—tin, copper, lead, iron—the result was always satisfactory, and the discoverers travelled about the country for a time turning other people's scraps of metal into gold. Then the supply of the a-yet hkè ran out; and the great question is now where to get more of it. The invention of compressed beer created hope; but the acquisition of that article was disillusionising. It had not the magical properties of the a-yet khè, and it was not good to drink. There is here, perhaps, a promising field for sympathetic Western industry. It may be hoped that the wrecking of the ship had nothing to do with communicating its special virtue to the compressed spirit; otherwise we might have an alarming series of maritime disasters all round the Gulf of Martaban. Burning houses to get roast pig would be a trifle to this.

822 795 These are a few of the methods adopted, and they may be taken as samples of them all. None of them are more scientific, and the three I have described enjoy the reputation of being entirely successful in the right hands. But the practice is much discountenanced by the pious. Alchemy is specially denounced by the Lord Buddha. It tends to induce covetousness; and the striving is in itself the best evidence of a love for the things of this world, which incapacitate a man for the contemplative states of zān and arupa—how much more, then, for ne'ban. The monks, the Assembly of the Perfect, of course denounce it; for, in addition to the consulting of horoscopes—itself, though universal (the pôngyi himself had one drawn up when he was a week old), a Brahminical practice, and remote from true Buddhism—there are numerous other observances connected with alchemy which are still more heretical. In addition to consulting his 822 781 sadā for a lucky hour, the alchemist frequently also obtains omens through the augurs from the bones of a sacrificial fowl. It is arranged that the thigh bones of a chicken shall

2:Scott G-5 (1870's-1909)1910 APl Burma
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be examined. A condition is imposed that the bones shall exactly correspond, or that there shall be certain defined differences. The hollows of the tendons, for example, shall be like or unlike, the bones shall be even or uneven, and so on. This being accurately settled, the bones are, after the chanting of bedin, and cabalistic spells, held up side by side, and critically examined. An experienced eye is necessary to read the result properly, and interpret the full signification of the omens. Fortunately, or unfortunately, as you like to take it, if there are two augurs present, they almost always differ, and the intending experimenter is left free to follow the opinion that he approves of, or which fits in best with his plans. This superstition, besides being abhorrent in itself, on account of the taking of life, is particularly objectionable to the mendicants, as implying that there are others besides themselves commanding respect and receiving reverence. The openly avowed alchemists are therefore a much abused body. But they have the consolation of knowing that almost every Burman has tried his hand at eggayat htothi and failed. There are very many monasteries where experiments have been made notwithstanding theoretical denunciations.

2:Scott G-5 (1870's-1909)1910 AP1 Burma
Burmese AP4

757 of the falling of a thunderbolt and finds meteoric stones, has sufficient to set him up as a doctor at once. The scrapings of the stone, among other things, are the best possible ophthalmic medicine. Liquids are very seldom used. There are, however, two schools—the datsayās, or dietists, who trust solely to regulating the patient's food according to the derangement of the elements, which is supposed to cause his disease, and eschew drugs; and the beindawsayās, who rely upon the exhibition of medicines. These last, the druggists, are far more numerous than the dietists. It is a great deal more easy to get a reputation with potent drugs than with a simple regulation of the diet, and accordingly an upstart doctor is always a druggist. The best advisers are those who combine the two systems, but such sensible practitioners are unfortunately few and far between.

●822 826 753 Both assert that the human body is composed of four dat, or elements. These are—patawi daht, earth; apaw dat, water; tezaw dat, fire; wayaw dat, air. Akatha, or ether, is sometimes added to these, but the doctors mostly disregard it. Earth constitutes the flesh, bones, hair, intestines, and the like members of a man. Water constitutes the fat, blood, bile, spittle, mucus, etc. Eating, drinking, chewing, and licking come from the fire element. Air produces the six kinds of winds. Any derangement of the equilibrium of these elements makes a man ill, and it is important to know the precise time of a man's birth in order to know in what proportion the dat should be present. 753 Therefore in the case of illness an experienced doctor almost always examines a man's birth certificate before he looks at the sick man himself. Besides the derangement of the elements, diseases may be caused by kan, the influence of the sum of good and bad actions a man has done in past existences. If a man is ill of kan, nothing will cure him but the preponderance of good in his past lives. Again, a man may fall sick through derangement of his seit, or mind; through the influence of the seasons, utu; or, lastly, through food, ahāya. These causes, being laid down as the basis of the diagnosis, naturally do not always lead to the best results in the case of affections which are in any way out of the common run. Even in perfectly evident illnesses, however,

21: Htin Aung E-5 (ca. 1930) 1937 AP1 Burma
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534* begs his mother to let him go his own way. The king does not know whether to break his word or not, but he is more or less forced to decide in favour of Zayathein as all the ministers press for the appointment of that prince as successor. The king then retires to the forest and Zayathein becomes king. The new king bears no malice towards Parpahein, who, however, refuses to come and pay homage to him. As the messengers sent to order him to come and pay homage are roughly treated by Parpahein and his followers, the king has no choice but to arrest his brother and put him as a labourer in the elephant stables as punishment. Athumbain, the youngest of the brothers, tries to get Parpahein's release, but in vain. That night, however, Parpahein succeeds in escaping from the stables and tries to scale the walls of the palace with the intention of assassinating the king. The latter, fortunately, is not in the palace. He has come out to listen unrecognized to the gossip of the city and learn the verdict of his people on the happenings of the day and the changes in the palace. The king sees Parpahein, and in the scuffle that follows, the king is victorious. The palace-guards come out in alarm, and Parpahein is given in charge to be executed at dawn. Athumbain arrives on the scene, and succeeds in obtaining the king's pardon for Parpahein, who is, however, ordered to leave the kingdom at once. Parpahein pretends to leave for the frontier, but actually he goes to a remote part of the kingdom. He arrives there at dawn, and succeeds in winning the villagers to his side. He and his men make ready to march on the city. At dusk, in a part of the forest near the rebellious villages, Athumbain and a few bodyguards arrive on an embassy to a neighbouring kingdom to bring back its princess to be the queen of Zayathein. They pitch their camp for the night. During the night, Parpahein and his rebels march through the forest on their way to attack the city, and discover Athumbain and his followers. The young prince is executed on a trivial charge, and his followers are forced to join the rebel army. Parpahein and his men take the city and palace by surprise, but Zayathein escapes with his magic sword and spear. There is still some chance for him to regain the throne with his magic weapons, and he goes to the forest to bide his time. There he finds the dead body of his brother, and he is nearly maddened with grief. An alchemist[1] enters on the scene and recognizing his king, restores the

[1] The Burmese alchemist is somewhat different from his European counterpart.

21: Htin Aung E-5 (ca. 1930) 1937 AP1 Burma
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to be under the direct control of the state. But as living actors were now past such control, he turned his attention towards puppets, which were in great demand by the people. He realized the possibilities of puppets in the newly arisen national drama. The puppet show, which was then entirely independent of the drama and the living actors, started with different animals coming out one by one, and each gave a special dance to a particular tune of its own, played by the orchestra, then a *zaugyee*[1] appeared and danced, and finally, a prince and princess came out, made love, sang and danced. The puppets were from 2½ to 3 feet in height, and were worked by strings. As stage, there was a raised platform, with a black curtain, behind which the show-men stood and manipulated the puppets. The men's hands were visible, but as the platform was about four feet high and the audience had to look up, the hands did not distinctly come into the line of vision. The platform was about twenty feet in length, and the width of the part in front of the curtain was about four feet.

The minister put the puppet show under direct state patronage and control. Under him the puppet show became similar to an ordinary dramatic presentation except that puppets performed instead of living actors. The use of puppets to act the play of course caused the introduction of new puppets, but it also rendered the *zaugyee* and animal puppets unnecessary; yet they were retained all

[1] *Zaugyee* is the Burmese term for an alchemist. It is a derivative of the Indian word *yoga* but the Burmese alchemist has little in common with the Indian ascetic. It is an example of how names of Pali and semi-Buddhist origin were applied to already-existing native ideas.

A man (but not a woman) becomes a *zaugyee* when he has introduced into his body the right metal-compounds. To obtain those compounds, he has to experiment on metals with quicksilver or iron. In the first case, he becomes a 'quicksilver *zaugyee*' and in the second, an 'iron *zaugyee*', but both have the same powers. A *zaugyee* lives for millions of years, and can travel in the air, in water, or under the earth, for his body has reached the state when it is beyond the ordinary laws of nature. A halfway stage in the experiments is reached when a 'stone of live metal' (equivalent to the medieval 'philosopher's stone') is obtained. A person in actual possession of the stone can fly in the air and travel under the earth, but his powers are entirely dependent on the stone, i.e. his body is still an ordinary human body. The stone turns lead into silver and brass into gold. It will be seen that a Burman striving to become a *zaugyee* has much in common with the medieval European alchemist.

The beliefs connected with the *zaugyee* are still widely current. For a detailed account of Burmese alchemy, see the writer's 'Alchemy and Alchemists in Burma' in *Folk-Lore*, December 1933.

25: Ferrars E-5 (ca. 1890) 1901 AP1 Burma
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220. GOLD-BEATERS.

circulates in Burma is three times the value of the lowest Indian coin. Notes have no circulation as yet among the Burmans, although they now bear their figures of value in Burmese.

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306 Rubies and sapphires (*kyauk-nyat*) are separated from the sand and gravel of certain localities, notably Mogôk, in the same way as gold is. Hard gems are cut with gem-dust on a horizontal wheel driven by a fly-wheel and treadle in a regular lathe-stand. Rock-crystal is cut in this way and also on a bone. Jade is found at Mogaung and is exported to China. Amber is found at Bamáw.

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306 Gold-leaf is used in enormous quantities for gilding *zedi* and images. Only pure gold is employed. The paper for separating the gold-leaf in the book in

gold and silver bullion were used for exchange, as they still are in the Shan States. Chinese gold is current in the form of foil with the market stamp of fineness. It can be conveniently cut with scissors and weighed. Travellers often carry their bullion in this form. Silver is used by the Shans in the form of ingots which have to be hewn and assayed when making a purchase. The standard for commodities, wages and rent is silver, the fluctuation being referred to the gold. The lowest coin that

221. ALCHEMISTS.

25: Ferrars E-5 (ca. 1890) 1901 API Burma
Burmese AP4

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243. DEFILE BELOW THE GREAT RAPID OF THE SALWEEN.

which it is hammered is obtained from bamboo-fibre.

In Burma the idea still prevails that gold may be compounded from baser metals or the quantity of fine gold augmented by their means. Alchemists are found in every town, who experiment in the hope of success or practise on dupes who furnish the gold that is to be increased. A furnace and blast is the chief appliance of the laboratory, and the potent agent relied upon is mercury. Ingredients of every sort, animal, vegetable and mineral, are experimented with, under the influence of charms and cabalistic forms, whence the name for alchemy, *akkaya-tò*. The business is under the ban of religion, not alone as being actuated by greed (*lawba*, p. 44), but because primitive Buddhism eschews everything mystical and occult. The operations are carried on at night for secrecy. Reputed adepts are found among the class of recluses called *yathé*, who from their life in the wilds are supposed to penetrate the arcana of nature.

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Wood-work was greatly restricted until better tools were imported. Planks and scantlings used to be laboriously prepared for boat-building and for palaces, religious edifices, and the houses of the great. Excepting the inner gates of the masonry temples, wood-work over a century old is scarce. But before the Burmans possessed the means of turning their timber to account for themselves, the country had become noted for its stock of teak. Burma possesses many valuable woods, but the pre-eminence of teak is such that for general purposes *timber* had come to mean always *teak* timber. Teak possesses the advantages

244. TEAK-TREE OUT OF LEAF (MARCH).